



# When to Fix to the Pelvis -and “how”

ICEOS 2017 Session 9 “Tips & Tricks”

Paul Sponseller

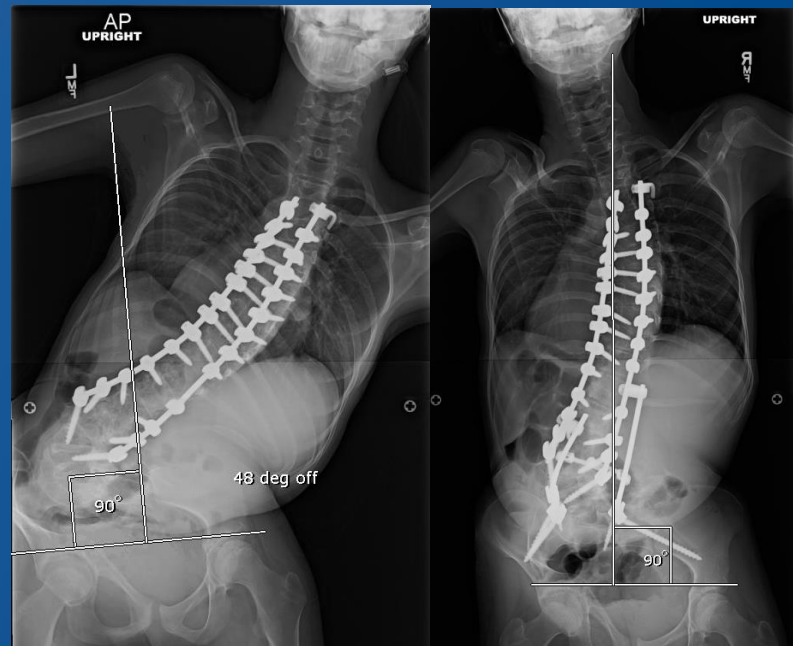
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# Paper 94: Don't You Wish You Had Fused to the Pelvis the First Time? THE JOURNAL OF BONE JOINT SURGERY Nielsen.... Skaggs

## Take Home Message:

- Advise Families if a second operation to the pelvis is needed
  - it will be as “big” as the first surgery
    - OR time
    - EBL
  - likely end up with less correction



# Does the Same apply to EOS?

# Advantages of Fixation Short of Pelvis



- Lower infection rate?
- Increased mobility (if it works)
- Fewer CSF risks

# Advantages of Fixing to Pelvis

- Strongest distal anchors
- Foundation for rotational control
- Better sagittal control
- Better coronal control

# My indications for Fixing short of Pelvis

- Apex above L1
- End vertebra L4 or higher
- Upright balance:
  - Stander or independent sitter
  - With level pelvis
- Adequate distal anchor purchase above pelvis

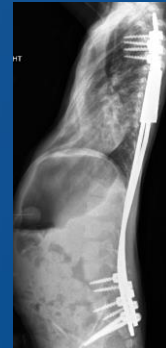
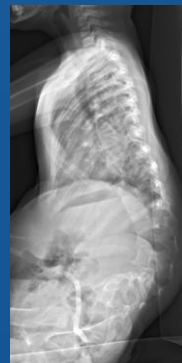
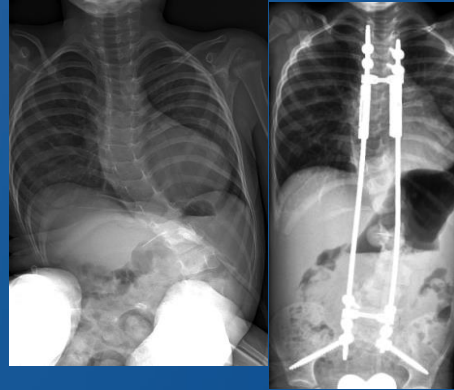
# Un-needed fixation to pelvis

- Less correction of intended segment



# Infantile Marfan Syndrome

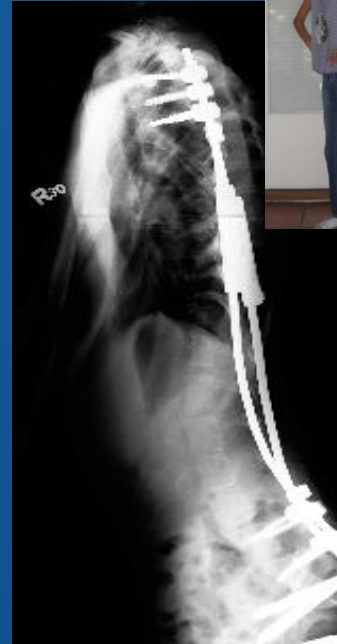
- 2.5 yr old
- 3 heart valves
- GR replaced with MAGEC





# VEPTR in Marfan

- Forward lean progresses



# EOS instrumentation = later fusion JOHNS HOPKINS MEDICINE

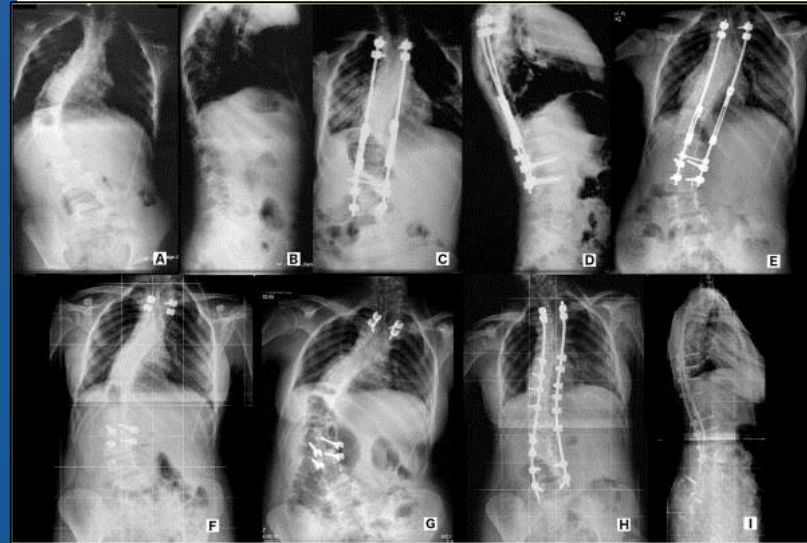
JBJS Sept 2017

## Graduation Protocol After Growing-Rod Treatment: Removal of Implants without New Instrumentation Is Not a Realistic Approach

Ismail Aykut Kocyigit, MD, Z. Deniz Olgun, MD, H. Gokhan Demirkiran, MD,  
Mehmet Ayvaz, MD, and Muharrem Yazici, MD

*Investigation performed at the Department of Orthopaedics and Traumatology, Hacettepe University Hospitals, Ankara, Turkey*

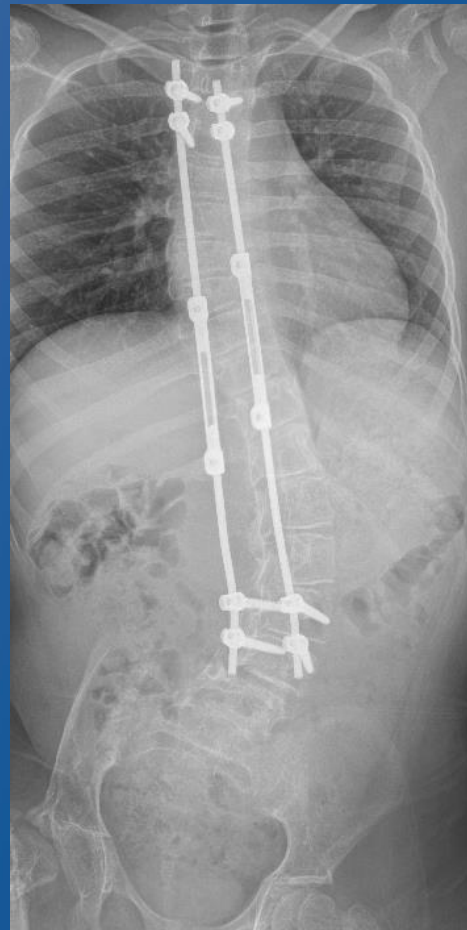
- Yazici
- Fixing to the pelvis implies
  - fusing there later.



11/5/2018

# CP

- 8.5 y.o.
- GMFCS 5
- Non amb



- How to Fix to the Pelvis: Simplicity Matters

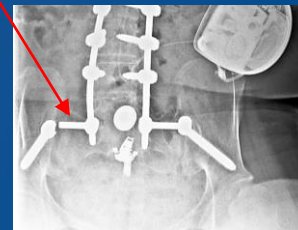
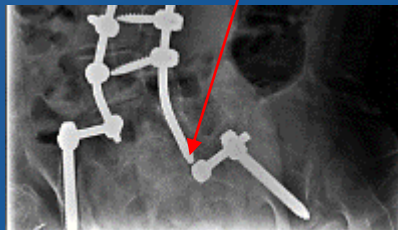
- Aboussamra...HSG*

Pelvic Obliquity



# Pelvic Implant – Related Complications

- Unit Rod Group (11%)
  - 1 reoperation:  
Pseudarthrosis at L5 - S1
- SAI Group
  - 0% pelvic implant – related complications
- Iliac Screws Group (14%)
  - 6 Cases:
    - 2 Prominent Screws (not needing reop)
    - 3 disconnections (1 not reop, 2 reop)
    - 1 loose iliac screw that needed removal



# Thank You





# Thank you!

